

AMENDMENTS TO THE CLAIMS

Claims pending

- At time of the Action: Claims 1-53.
- After this Response: Claims 1-53.

Canceled or Withdrawn claims: None.

Amended claims: 1, 16, 24, 32, 33, 36, 37, 38, 44, 45, 46, 49 and 50.

New claims: None.

1. (Currently Amended) A method, comprising:

connecting to a server to receive streaming content at a first rate;

receiving a portion of the streaming content at the first rate;

requesting the server to send a particular amount of future streaming content at a second rate without determining the rate at which the portion of the streaming content is received;

receiving the particular amount of future streaming content at an actual rate that is greater than the first rate and less than or equal to the second rate;

determining if the actual rate is viable for receiving the streaming content; and

if the actual rate is viable for receiving the streaming content, requesting the server to send remaining streaming content at a rate that is not greater than the actual rate.

2. (Original) The method as recited in claim 1, further comprising receiving the remaining streaming content at the first rate if the actual rate is not viable for receiving the streaming content.

3. (Original) The method as recited in claim 1, further comprising specifying the first rate.

4. (Original) The method as recited in claim 1, further comprising determining the first rate from a history file that identifies at least one previous rate of connection with the server.

5. (Original) The method as recited in claim 4, wherein the determining the first rate from a history file further comprises taking a median rate from one or more rates stored in the history file.

6. (Original) The method as recited in claim 1, further comprising calculating available connection bandwidth to determine the first rate.

7. (Original) The method as recited in claim 1, wherein the particular amount of future streaming content further comprises a certain number of seconds of streaming content data.

8. (Original) The method as recited in claim 1, wherein the particular amount of future streaming content further comprises a certain number of data packets of streaming content data.

9. (Original) The method as recited in claim 1, wherein the particular amount of future streaming content further comprises a certain number of bytes of streaming content data.

10. (Original) The method as recited in claim 1, wherein the receiving the particular amount of future streaming content at the actual rate further comprises detecting an indication of when the particular amount of future streaming data begins.

11. (Original) The method as recited in claim 10, wherein the indication of when the particular amount of future streaming data begins comprises a time stamp.

12. (Original) The method as recited in claim 10, further comprising detecting an indication of when the particular amount of future streaming data ends.

13. (Original) The method as recited in claim 12, wherein the indication of when the particular amount of future streaming data ends further comprises a certain number of data packets of streaming content data received.

14. (Original) The method as recited in claim 12, wherein:

the indication of when the particular amount of future streaming data begins further comprises a sequence number of a first data packet of the future streaming data; and

the indication of when the particular amount of future streaming data ends further comprises a sequence number of a last data packet of the future streaming data.

15. (Original) The method as recited in claim 1, further comprising using at least some of the particular amount of future streaming content received at the actual rate to increase content stored in a content buffer.

16. (Currently Amended) A method, comprising:

receiving a request from a client to stream content to the client at a first transmission rate;

streaming content to the client at the first transmission rate;

receiving a request from the client to increase the streaming to a second transmission rate for a specified amount of content data;

streaming the specified amount of content data to the client at the second transmission rate; and

automatically resuming streaming content, after the specified amount of content data,
to the client at the first transmission rate.

17. (Original) The method as recited in claim 16, further comprising providing an indication to the client of when the content streamed at the second transmission rate begins.

18. (Original) The method as recited in claim 17, wherein the providing an indication further comprises flagging a first data packet transmitted at the second transmission rate.

19. (Original) The method as recited in claim 17, further comprising providing an indication to the client of when the content streamed at the second transmission rate concludes.

20. (Original) The method as recited in claim 16, wherein the specified amount of content data to be transmitted at the second transmission rate is identified as a number of seconds of content data.

21. (Original) The method as recited in claim 16, wherein the specified amount of content data to be transmitted at the second transmission rate is identified as a number of data packets.

22. (Original) The method as recited in claim 16, wherein the specified amount of content data to be transmitted at the second transmission rate is identified as a number of bytes of content data.

23. (Original) The method as recited in claim 16, further comprising:
receiving a request to stream remaining content at the second transmission rate; and
transmitting remaining streaming content at the second transmission rate.

24. (Currently Amended) A system, comprising:
an interface to a network that provides at least a connection to a server;
a control module configured to receive streaming content from the server ~~at a first streaming rate and to request the server to modify the a first streaming rate to a second streaming rate for a specified amount of streaming content data~~ without determining the first streaming rate;

a bandwidth measurement module configured to determine an actual streaming rate resulting from the request to modify the first streaming rate to the second streaming rate, and to determine the adequacy of the streaming at the actual streaming rate; and

wherein the control module is further configured to request the server to stream remaining streaming content at a rate that is not greater than the actual streaming rate if the bandwidth measurement module determines that the actual streaming rate is adequate for streaming the remaining streaming content.

25. (Original) The system as recited in claim 24, wherein the second streaming rate is higher than the first streaming rate.

26. (Original) The system as recited in claim 24, further comprising a history list that contains at least one streaming rate at which the server has adequately streamed content to the client.

27. (Original) The system as recited in claim 26, wherein the control module is further configured to derive the first streaming rate from the history list.

28. (Original) The system as recited in claim 26, wherein the control module is further configured to store the actual streaming rate in the history list.

29. (Original) The system as recited in claim 24, wherein the specified amount of streaming content data is denoted as a particular number of seconds of streaming content data.

30. (Original) The system as recited in claim 24, wherein the specified amount of streaming content data is denoted as a particular number of bytes of streaming content data.

31. (Original) The system as recited in claim 24, wherein the specified amount of streaming content data is denoted as a particular number of data packets of streaming content data.

32. (Currently Amended) The system as recited in claim 24, wherein the bandwidth measurement module determines the adequacy of the streaming at the actual streaming rate while content is being streamed to the client over the network at the ~~actual~~second streaming rate.

33. (Currently Amended) A system, comprising:
a network interface configured to provide at least a connection to a client over a network;
one or more multi-bitrate files, wherein each multi-bitrate file~~that~~ stores two or more versions of streaming content, each version being configured for transmission at a different streaming rate; and
a control module configured to identify a request from the client to modify a first streaming rate at which a given version of the streaming content stored in a multi-bitrate file is being transmitted to the client to a second streaming rate for a ~~limited~~particular amount of streaming content data.

34. (Original) The system as recited in claim 33, wherein the control module is further configured to identify streaming content data transmitted to the client at the second streaming rate.

35. (Original) The system as recited in claim 34, wherein the control module is further configured to identify the streaming content data transmitted at the second streaming

rate by flagging one or more data packets included in the streaming content data transmitted at the second streaming rate as being data packets sent at the second streaming rate.

36. (Currently Amended) The system as recited in claim 33, wherein the ~~limited~~ particular amount of streaming content data is identified as a particular number of seconds of streaming content data.

37. (Currently Amended) The system as recited in claim 33, wherein the control module is further configured to identify a request from the client to transmit streaming content remaining after the ~~limited~~ particular amount of streaming content data has been streamed at the second streaming rate.

38. (Currently Amended) One or more computer-readable media containing computer-executable instructions that, when executed on a computer, perform the following steps:

requesting a server to transmit content file data over a network at a first transmission rate;

while receiving a portion of the content file data at the first transmission rate, requesting the server to transmit a ~~limited~~ specific portion of the content file data over the network at a second transmission rate;

receiving the ~~limited~~ specific portion of the content file data from the server at an actual transmission rate which is less than or equal to the second transmission rate;

determining if the network can viably support transmission of the content file data at the actual transmission rate during receipt of the specific portion of the content file data;

if the network can viably support transmission of the content data at the actual transmission rate, requesting the server to transmit subsequent content file data at a rate that is not greater than the actual transmission rate;

if the network cannot viably support transmission of the content data at the actual transmission rate, automatically receiving subsequent content file data at the first transmission rate; and

wherein the subsequent content file data is content file data that is transmitted after the ~~limited-specific~~ portion of content file data has concluded transmission.

39. (Original) The one or more computer-readable media as recited in claim 38, further comprising storing the actual rate in a history file associated with the server that contains one or more previous transmission rates at which content file data was adequately received from the server.

40. (Original) The one or more computer-readable media as recited in claim 38, further comprising determining the first transmission rate from a history list associated with the server that contains one or more previous transmission rates at which content file data was adequately received from the server.

41. (Original) The one or more computer-readable media as recited in claim 40, wherein the determining the first transmission rate from a history list further comprises determining a median rate included in the history list as the first transmission rate.

42. (Original) The one or more computer-readable media as recited in claim 38, further comprising calculating available network bandwidth to determine the first transmission rate.

43. (Original) The one or more computer-readable media as recited in claim 38, further comprising detecting when the transmission of the content file data at the actual transmission rate begins.

44. (Currently Amended) The one or more computer-readable media as recited in claim 38, wherein the ~~limited~~-specific portion of the content file data is specified as a number of seconds of transmission of content file data.

45. (Currently Amended) The one or more computer-readable media as recited in claim 38, wherein the ~~limited~~-specific portion of the content file data is specified as a number of bytes of content file data.

46. (Currently Amended) The one or more computer-readable media as recited in claim 38, wherein the ~~limited-specific~~ portion of the content file data is specified as a number of data packets of content file data.

47. (Original) The one or more computer-readable media as recited in claim 38, wherein the actual transmission rate is a higher rate than the first transmission rate.

48. (Original) The one or more computer-readable media as recited in claim 38, wherein the actual transmission rate is a lower rate than the first transmission rate.

49. (Currently Amended) One or more computer-readable media containing computer-executable instructions that, when executed on a computer, perform the following steps:

transmitting content file data to a client over a network at a first transmission rate;

receiving a request from the client to transmit a ~~limited-portion~~ particular amount of content file data to the client at a second transmission rate;

transmitting the ~~limited-portion~~ particular amount of content file data to the client at the second transmission rate; and

automatically transmitting content file data, subsequent to the ~~limited-portion~~ particular amount of content file data, to the client at the first transmission rate.

50. (Currently Amended) The one or more computer-readable media as recited in claim 49, further comprising identifying content file data transmitted at the ~~actual~~second transmission rate.

51. (Original) The one or more computer-readable media as recited in claim 50, wherein the identifying further comprises flagging a first data packet of content file data transmitted at the second rate.

52. (Original) The one or more computer-readable media as recited in claim 50, wherein the identifying further comprises flagging each data packet of content file data transmitted at the second rate.

53. (Original) The one or more computer-readable media as recited in claim 50, wherein the identifying further comprises beginning transmission of the content file data at a specified time.